

XIV. *Synonymic notes on the moths of the earlier genera of Noctuites.* By ARTHUR G. BUTLER, F.L.S., F.Z.S.

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DURING a recent re-arrangement of the genera *Agrotis*, *Mamestra*, and allies, I have discovered a considerable number of synonyms, which I now propose to record. In my re-arrangement I have in the main followed the classification employed in A. R. Grote's 'Check List of North American Moths' of 1882, as being on the whole more natural than that of Lederer (adopted by Staudinger and Wöcke); at the same time I have, to a certain extent, broken up the very heterogeneous group *Agrotis*, and, on the other hand, have amalgamated the homogeneous material separated under the names *Mamestra*, *Apamea*, *Hadena*, &c. In some instances, as in the case of *Triphæna*, I have adopted the generic name rather as representing a well-marked and easily recognised group than because it actually possesses any strictly generic value; but, as a rule, I have endeavoured to use only such names as appear to represent groups differing structurally from their nearest allies, though occasionally the structural distinctions are slight, and such as might be considered by some lepidopterists insufficient. It should, I think, always be borne in mind that the object of genera is to simplify as much as possible the study of nature, and therefore, that in the arrangement of such unwieldy genera as *Agrotis*, any single structural character ought to be considered sufficient, if it enables the student to break them up into groups of more manageable dimensions.

AGROTIS, *Ochs.*

I have restricted this genus to species the males of which have either pectinated or serrated antennæ, the serrations terminating in short cilia-like pencils. The type of the genus is *A. segetis*.

SYNONYMS TO AGROTIS.

1. *Agrotis segetis*, Gmel.

Agrotis marginalis, Walker, Lep. Het., x., p. 339, n. 77 (1856).

A. obliviosa, Walker, *l. c.*, p. 340, n. 78.

A. dividens, Walker, *l. c.*, p. 342, n. 86.

A. aversa, Walker, *l. c.*, p. 345, n. 92.

A. correcta, Walker, *l. c.*, n. 93.

A. repulsa, Walker, Suppl., 2, p. 696 (1865).

A. conspurcata, Walker, *l. c.*

A. certificata, Walker, *l. c.*, p. 697.

Of the above synonyms, *A. marginalis*, *obliviosa*, and *dividens* are from South Africa; *A. aversa*, *correcta*, and *repulsa* from India; *A. conspurcata* from Ceylon; and *A. certificata* from Shanghai. Mr. Walker has selected chiefly the dark female specimens of the species for description; *A. dividens*, however, is a dwarfed pale female with pinched-in abdomen and male colouring; it is described as a male.

2. *Agrotis biconica*.

Agrotis biconica, Kollar in Hügel's Kaschmir, iv., p. 480 (1842—44).

A. exigua, Kollar, *l. c.*, p. 481.

A. spiculifera, Guenée, Noct., i., p. 266, n. 425 (1852).

A. aristifera, Guenée, *l. c.*, n. 426.

A common and widely distributed Indian form, intermediate between *A. segetis* and *A. munda*. *A. exigua* is a name given to a starved specimen.

3. *Agrotis munda*.

Agrotis munda, Walker, Lep. Het., x., p. 348, n. 99 (1856).

A. basinotata, Walker, *l. c.*, xv., p. 1686 (1858).

A. ancituma, Walker, Suppl., 2, p. 701 (1865).

A. turbulenta, Walker, *l. c.*, 2, p. 703.

A. injuncta, Walker, *l. c.*

A common Australian species, easily distinguished from *A. segetis* and *biconica* by the blackish apical patch on under surface of secondaries.

4. *Agrotis interjectionis*.

♀ *Agrotis interjectionis*, Guenée, Noct., i., p. 281, n. 454 (1852).

♀ *A. orbicularis*, Walker, Lep. Het., Suppl., 2, p. 700 (1865).

♂ *A. significans*, Walker, l. c.

Java.

5. *Agrotis corticea*, Schiff.

Agrotis fraterna, Moore, Deser. Ind. Lep. Atk., ii., p. 116 (1882).

The Indian specimens differ in no respect from specimens in the Zeller series taken in Europe.

6. *Agrotis ignobilis*.

Mamestra ignobilis, Walker, Lep. Het., ix., p. 239, n. 39 (1856).

Agrotis rubrilinea, Walker, l. c., x., p. 351, n. 105 (1856).

A. recondita, Walker, l. c., n. 106.

A. dorsicinis, Walker, l. c., xv., p. 1701 (1858).

A slightly variable Australian species.

7. *Agrotis subgothica*, Haw.

Feltia ducens, Walker, Lep. Het., ix., p. 203, n. 1 (1856).

An example from Orilla.

8. *Agrotis jaculifera*, Guén.

The *A. tricolor* of Lintner is typical *A. jaculifera*, and *A. herilis* appears to me to be a very slight variety only distinguishable by its greyer coloration and the grey instead of dull whitish "orbicular" spot of primaries; at the same time, as we have a good series of the latter, and its specific identity with *A. jaculifera* is unproved, I have retained it as a distinct species in the collection.

Owing to the difficulty of collating the many scattered references to the descriptions of North American species, and the time which would be occupied in so doing, I cannot attempt here to look them up; a mere quotation

of the synonyms will be enough for those who make a special study of the N. American fauna.

9. *Agrotis vancouverensis*, Grote.

The *A. semiclarata* of the same author appears to me to be the female of *A. vancouverensis*.

10. *Agrotis venerabilis*.

Agrotis venerabilis, Walker, Lep. Het., x., p. 328, n. 49 (1856).

A. incallida, Walker, *l. c.*, p. 330, n. 52.

A fairly common N. American species, near to *A. volubilis* of Harris.

11. *Agrotis annexa*, Treit.

Agrotis anteposita, Guenée, Noct., i., p. 278, n. 449 (1852).

A. decernens, Walker, Lep. Het., x., p. 333, n. 60 (1856).

A very common New World species.

12. *Agrotis bipars*.

♀ *Agrotis bipars*, Walker, Lep. Het., x., p. 334, n. 62 (1856).

♂ ♀ *A. consueta*, Walker, *l. c.*, n. 63.

The types were all taken by Dyson in Venezuela.

13. *Agrotis bilitura*.

Agrotis bilitura, Guenée, Noct., i., p. 285, n. 467 (1852).

A. deprivata, Walker, Lep. Het., xi., p. 739 (1857).

A Chilean species, the males of which have the serration of the antennæ less pronounced than in any of this group of New World forms.

14. *Agrotis hostilis*.

Agrotis hostilis, Walker, Lep. Het., xi., p. 737 (1857).

A. consueta, Walker, *l. c.*, p. 738.

Graphiphora sobria, Walker, *l. c.*, p. 744.

Agrotis incommoda, Walker, *l. c.*, Suppl., 2, p. 692 (1865).

The types are from New Grenada and Venezuela.

15. *Agrotis spissa*.

Agrotis spissa, Guenée, Noct., i., p. 261, n. 415 (1852).

An example of this species in the Grote collection is labelled as *A. cochranii* of Riley; the latter, however, though nearly allied to *A. spissa*, is possibly distinct; it is much darker.

16. *Agrotis admirationis*.

Agrotis admirationis, Guenée, Ent. Month. Mag., v., p. 38 (1868).

? *Chersotis inconspicua*, Butler, Cist. Ent., ii., p. 545, n. 14 (1880).

Var. *Chersotis sericea*, Butler, *l. c.*, p. 490, n. 9 (1879).
New Zealand.

If our examples of *A. admirationis* are rightly identified I think the above must be considered synonyms; *A. sericea* is the more distinct form, the markings of the primaries being almost wholly absent, but it may well be a variety.

17. *Agrotis moderata*.

Agrotis? moderata, Walker, Lep. Het., Suppl., 2, p. 705 (1865).

Spelotus inconstans, Butler, Cist. Ent., ii., p. 545 (1880).

New Zealand.

We now possess nine examples of this species, and I find it impossible to separate the above, which varies not a little.

18. *Agrotis insignata*.

Agrotis insignata, Walker, Lep. Het., x., p. 330, n. 53 (1856).

A. tritici (part), Guenée, Noct., i., p. 288, n. 471 (1852).

Mamestra declarata, Walker, Lep. Het., Suppl., 2, p. 663 (1865).

Agrotis campestris, Grote (*vide* Check List, p. 25, n. 215).

A common N. American species allied to *A. tritici*.

19. *Agrotis divergens*.

Agrotis divergens, Walker, Lep. Het., x., p. 327, n. 46 (1856).

Agrotis versipellis of Grote is indistinguishable from this species.

20. *Agrotis spina*.

Agrotis spina, Guenée, Noct., i., p. 269, n. 433 (1856).

A. capularis, Guenée, *l. c.*, p. 271, n. 437.

Mamestra tenebrosa, Walker, Lep. Het., Suppl., 2, p. 669 (1865).

A common Australian species.

The genus *Pachnobia* appears to me to be a mere group of *Agrotis*; I restrict it to *P. carnea*, *rubricosa*, *imperita*, *geniculata*, and *salicarum*.

PERIDROMA, Hübner.

Differs from *Agrotis* in the finely ciliated (neither pectinated nor serrated) antennæ of the males. Type, *P. saucia* (*ypsilon*, Rott.).

Peridroma ypsilon, Rott.

Noctua saucia, Hübner, Samml. Europ. Schmett., fig. 378.

Agrotis differens, Walker, Lep. Het., x., p. 336, n. 67 (1856).

A. ambrosioides (Morrison), Walker, Lep. Het., xi., p. 738 (1857).

Var. *Spælotis stictica*, Blanchard, in Gay's 'Fauna Chilena,' vii., p. 73, n. 1; pl. 6, fig. 8 (1854).

Var. *Agrotis impacta*, Walker, Lep. Het., x., p. 337, n. 71 (1856).

A. intecta, Walker, *l. c.*, p. 338, n. 72.

An example in the Grote collection corresponding with the variety *A. impacta* is labelled "*Agrotis turris*"; the variety *A. stictica* is the most extreme variegated form of the species.

TIRACOLA, Moore.

A strong-bodied Sphingiform genus, the males of which have simple antennæ.

Tiracola plagiata.

Agrotis plagiata, Walker, Lep. Het., xi., p. 740 (1857).

A. plagifera, Walker, l. c., p. 741.

Var. *Agrotis spectabilis*, Walker, l. c., Suppl., 2, p. 704 (1865).

Java, Borneo, Ceylon, Canara, Darjiling, and Moreton Bay.

The Canara specimens are labelled "*sphingiformis*," apparently a MS. name proposed by Adam White; the variety from Moreton Bay is simply a dark-coloured example. Mr. Druce has the same variety from Mexico and Rio Janeiro.

The genus *Spælotis* (type *S. ravidata*) consists of a few oblong-winged species, the males of which have simple antennæ; I think it doubtful whether this group should be kept separate from the *Noctua* of authors, which it greatly resembles.

SPÆLOTIS, Boisd.

Spælotis ravidata, Schiff.

Noctua clandestina, Harris, Ins. inj. veg., 3rd ed., p. 448 (1852); 1st ed. (1841).

Mamestra unicolor, Walker, Lep. Het., ix., p. 233 (1856).

Graphiphora valida, Walker, l. c., Suppl., 3, p. 711 (1865).

G. caliginosa, Butler, Ann. Nat. Hist., 5, vol. i., p. 165 (1878).

A somewhat variable common and widely-distributed species; the European examples are, as a rule, smaller than those from other parts of the world. In the Grote collection I found a female of this species labelled as "*A. pastoralis*, Grote."

Most of the species hitherto placed in *Spælotis* will have to be removed to *Chera*.

CHERA, Hübn.

Chera birivia, Hübn.

I cannot distinguish the *Agrotis dolis* of Grote from this species.

GRAPHIPHORA, Ochs.

This genus, of which *G. augur* is type, must be restricted to a small group of broad-winged species; it will include *G. sierræ*, *augur*, *haruspica*, and *major*. *G. haruspica*, though very closely allied to *G. augur*, differs in being constantly much darker and usually larger.

AMATHES, Hübn. (NOCTUA, auct.).

The type of this genus is *A. baja*; *Spælotis*, Boisd., may have to be sunk as a synonym of it.

AMATHES, Hübn.

1. *Amathes phyllophora*, Grote.

Agrotis phyllophora, *variata*, *varix*, and *alternata* are all colour variations of one species; under *A. phyllophora* there are specimens indistinguishable, even in colour, from others labelled "*A. alternata*" by Grote, whilst all intermediate gradations exist between the reddest *A. phyllophora* and the blackest *A. alternata*.

2. *Amathes jucunda*, Walk.

Graphiphora jucunda, Walker, Lep. Het., x., p. 399, n. 27 (1856).

This is the *Agrotis conflua* of Grote's collection, but not of Europe.

3. *Amathes comma*.

Mamestra comma, Walker, Lep. Het., ix., p. 239, n. 40 (1856).

Graphiphora implexa, Walker, *l. c.*, x., p. 405, n. 42 (1856).

Hadena plusiata, Walker, *l. c.*, Suppl., 3, p. 742 (1865).

Xylina collaris, Walker, *l. c.*, p. 752.

Nitocris bicomma, Guenée, Ent. Month. Mag., v., p. 4 (1868).

A common New Zealand form, the sexes of which are very dissimilar.

4. *Amathes atra*.

♀ *Agrotis atra*, Guenée, Noct., i., p. 272, n. 438 (1852).

♂ *A. hydræcioides*, Guenée, *l. c.*

Graphiphora reclusa, Walker, Lep. Het., x., p. 403 (1856).

G. instipata, part Walker, l. c., p. 404.

♀ var. *Agrotis testaceicollis*, Guenée, Noct., i., p. 273 (1852).

Mamestra lucifera, Walker, Lep. Het., Suppl., 2, p. 668 (1865).

The Australian representative of the preceding species.

5. *Amathes instipata*.

Graphiphora instipata, Walker, Lep. Het., x., p. 404, n. 40 (1856).

Hadena congregata, Walker, l. c., xi., p. 598, n. 94 (1857).

Orthosia ? *lunifera*, Walker, l. c., p. 747.

An Australian species allied to the preceding.

6. *Amathes velata*.

Graphiphora velata, Walker, Lep. Het., Suppl., 3, p. 710 (1865).

Agrotis cupida of Grote is this species; *A. brunnei-pennis* is a brownish variety, and *A. placida* a variety of the female, in which the hind wings are dark brown.

7. *Amathes parentalis*.

Agrotis parentalis, Grote, is a species nearly allied to *A. cuprea* of Europe, of which *A. decipiens* is probably only a dark variety; we have one pale example of *A. cuprea* from Washington Territory.

8. *Amathes bicarnea*.

Noctua bicarnea, Guenée, Noct., i., p. 329, n. 546 (1856).

Mamestra plagiata, Walker, Lep. Het., Suppl., 2, p. 664 (1865).

A common North American species.

OCHROPLEURA, Hübn.

This is a mere section of the preceding genus, in which the secondaries are shining white.

Ochropleura plecta.

Phalæna-Noctua plecta, Linneus, Syst. Nat., p. 2851, n. 157.

Ochropleura vicaria, Walker, Lep. Het., x., p. 409, n. 7 (1856).

O. costalis, Moore, P. Z. S., 1867, p. 56.

I can discover no difference whatever between European, African, North American, Japanese, or Indian examples of this species.

ANYTUS, Grote.

This genus seems to me much more like *Pharetra* (which I refer to the *Arctiidæ*) than to the *Noctuidæ*, but for the present I have left it where Grote placed it. •

Anytus privatus.

Polia privata, Walker, Lep. Het., xi., p. 521, n. 19 (1857).

This is the *Xylina sculpta* of Grote from N. America.

EUCOPTOCNEMIS, Grote.

A small genus of broad-winged species with deeply pectinated male antennæ.

Eucoptocnemis fimbriaris.

Heliophobus fimbriaris, Guenée, Noct., i., p. 172, n. 271 (1852).

Graphiphora obvia, Walker, Lep. Het., xv., p. 1707 (1858).

N. America.

TETRAPYRGIA, Walk.

• *Tetrapyrgia graphiphorides*.

Tetrapyrgia graphiphorides, Walker, Lep. Het., Suppl., 3, p. 712 (1865).

Elegarda summa, Walker, l. c., p. 713.

Tasmania.

The first type is a worn example. The antennæ of males in this genus are extremely long, tapering, and pectinated strongly to near the tips, which are naked.

Tetrapyrgia pectinata.

Spælotis pectinata, Walker, Lep. Het., Suppl., 3,
p. 707 (1865).

Elegarda orthosioides, Walker, l. c., p. 712.

Moreton Bay.

A rather variable species.

SEMIOPHORA, *Steph.*

Very similar to *Amathes* (*Graphiphora*, auct.), but the males with antennæ strongly pectinated, as in the genus *Eucoptocnemis*; several of the species hitherto referred to *Agrotis*, *Graphiphora*, and *Tæniocampa* belong rightly to this genus.

Semiophora elimata.

Graphiphora elimata, Guenée, Noct., i., p. 333, n. 556
(1852).

The *Agrotis dilucida* of Morrison is indistinguishable from this species.

MAMESTRA, *Ochs.*

The bulk of the species hitherto referred to *Apamea* and *Hadena* are structurally identical with *Mamestra*; the same pattern also runs through the species.*

1. *Mamestra dissimilis*, Knoch.

I cannot distinguish the *M. atlantica* of Grote from this species.

2. *Mamestra thalassina*, Hüfn.

M. nevadæ of Grote is this species.

3. *Mamestra cristifera*.

Acronycta cristifera, Walker, Lep. Het., xv., p. 1654
(1858).

This is the *Mamestra lubens* of Grote.

* The lashed or smooth eyes of species otherwise closely allied do not in my opinion constitute a safe generic character.

4. *Mamestra gemina* var. *remissa*.

Noctua remissa, Hübner, Schmett. Eur. Noct., pl. 90, fig. 423.

Xylophasia indocilis, Walker, Lep. Het., ix., p. 178, n. 19 (1856).

N. America.

5. *Mamestra modica*.

Apamea modica, Guenée, Noct., i., p. 207, n. 327 (1856).

Celæna subcedens, Walker, Lep. Het., x., p. 204, n. 11 (1856).

New York.

6. *Mamestra instructa*.

♀ *Hadena instructa*, Walker, Lep. Het., Suppl., 3, p. 733 (1865).

♂ *H. rubescens*, Walker, *l. c.*

Cape (*Trimen*).

7. *Mamestra egens*.

Celæna egens, Walker, Lep. Het., x., p. 263, n. 10 (1856).

Hadena ? *stricta*, Walker, Lep. Het., Suppl., 3, p. 728 (1865).

This is the *Mamestra cinnabarina*, var. *ferrea*, of Grote, which it will supersede.

8. *Mamestra consanguis*.

Hadena consanguis, Guenée, Noct., ii., p. 97, n. 810 (1852).

Apamea undicilia, Walker, Lep. Het., ix., p. 251, n. 18 (1856).

A common Indian species.

9. *Mamestra renisigna*.

Celæna renisigna, Walker, Lep. Het., x., p. 267, n. 20 (1856).

Hadena depulsa, Walker, *l. c.*, xi., p. 590, n. 75 (1857).

H. ficita, Walker, *l. c.*, Suppl., 3, p. 734 (1865).

H. contracta, Walker, *l. c.*, p. 735.

Cape of Good Hope.

10. *Mamestra thoracica*.

♀ *Mamestra thoracica*, Walker, Lep. Het., xv., p. 1684
(1858).

♂ *Hadena languida*, Walker, l. c., p. 1728.

Natal (*Gucinzius*).

As I continue the arrangement of the general collection of Noctuites, it is certain that numerous other synonyms will be discovered. As regards tropical New World forms, it is certain that I shall overlook many, from lack of sufficient material; but probably most of these will be cleared up by Mr. Druce, whose series of Central and South American moths is so ample that in some variable genera the most astonishingly dissimilar forms are clearly seen to be mere sports.